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APPLICANT : SUMITOMO SPECIAL METALS CO LTD;

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TITLE : RARE-EARTH MAGNET EXCELLENT IN CORROSION RESISTANCE

ABSTRACT : PURPOSE: To obtain a permanent magnet being excellent in corrosion resistance, by specifying the composition of an Fe-B-R permanent magnet material and by applying simple surface treatment thereto.

CONSTITUTION: A sintered substance having a tetragonal crystal structure as a main phase is made of Nd 11~15 atom % and Dy 0.2~3 atom %, the total quantity of which is 12~17 atom %, and further B 5~8 atom %, CoO 0.5~13 atom %, Al 0.5~4 atom %, C 1000ppm or less and Fe and inevitable impurities as the rest. Magnet characteristics are improved further by making the substance contain Ti or Nb of 0.1~1 atom % in addition. A film prepared by mixing a rust-proof pigment in epoxy resin or the like is formed and baked on the surface of said sintered substance. The film thickness is preferably 25 μ m or less. In addition, it is advisable to provide a ground film of phosphate. According to this constitution, a magnet being excellent in corrosion resistance can be obtained.

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